Please replace paragraph [0036] with the following amended paragraph:

[0036] Referring to FIG. 3, set-top box 106 can receive a TV broadcast from a plurality of sources such a as satellite source 324, wireless Multipoint Microwave Distribution System (MMDS) source 323, x digital subscriber loop (DSL) source 322, cable modem source 321, and a video server and tape machine source 316 via broadcast network 312. Insertion platform architecture 110 includes insertion server 303A, audio/video (A/V) decoder 313, repository 304A, properties, rules & logic 304B, pattern engine 305, insertion server 303B, A/V decoder 315, existing content file server 316A, existing content databases 316B, and multiplexer/encoder 314.

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (Currently Amended) In an interactive television (TV) environment, a method comprising:
        recognizing one or more elements in a broadcast data stream; and
        <u>prior to broadcasting,</u> automatically inserting an interactive TV trigger into the broadcast
data stream based on the recognized elements.

2.   (Original) The method of claim 1, further comprising:
        pre-inserting the interactive TV trigger into any stored content that will constitute the
broadcast data stream.

3.   (Original) The method of claim 2, wherein the elements include voice elements.

4.   (Original) The method of claim 2, wherein the elements include other audio elements.

5.   (Original) The method of claim 2, wherein the elements include video elements.

6.   (Original) The method of claim 2, wherein the elements include text elements as a special
degenerate case of video elements.

7.   (Original) The method of claim 2, wherein the automatically inserting of the interactive TV
trigger includes automatically inserting the TV trigger into the broadcast data stream based on the
recognized elements.

8.   (Original) The method of claim 1, further comprising:
        delivering the broadcast data stream with the inserted interactive TV trigger to one or more
receivers for display.

9. (Original) The method of claim 1, wherein the automatically inserting of the interactive TV trigger includes automatically inserting the interactive TV trigger into the broadcast data stream within a receiver.

10. (Original) The method of claim 1, wherein interactive TV trigger includes an Advanced Television Enhancement Forum (ATVEF) trigger.

11. (Currently Amended) In <u>an</u> interactive television (TV) system environment, a system comprising:

      an insertion platform to insert automatically, <u>and prior to broadcasting,</u> interactive TV triggers into a broadcast data stream.

12. (Original) The system of claim 11, further comprising:

      a recognizing unit to recognize one or more elements in the broadcast data stream.

13. (Original) The system of claim 12, wherein the elements include voice elements.

14. (Original) The method of claim 12, wherein the elements include other audio elements.

15. (Original) The method of claim 12, wherein the elements include video elements.

16. (Original) The method of claim 12, wherein the elements include text elements as a special degenerate case of video elements.

17. (Original) The system of claim 12, wherein the automatically inserting of the interactive TV trigger includes automatically inserting the TV trigger into the broadcast data stream based on the recognized elements.

18. (Original) The system of claim 11, further comprising:

      a delivering unit to deliver the broadcast data stream with the inserted interactive TV trigger to one or more receivers for display.

19. (Original) The system of claim 18, wherein the receivers are to insert automatically the interactive TV trigger into the broadcast data stream within.

20.	(Original) The system of claim 11, wherein the interactive TV trigger includes an Advanced Television Enhancement Forum (ATVEF) trigger.

21.	(Currently Amended) A computer-implemented method comprising:
	recognizing a media asset in a broadcast data stream;
	checking if the media asset matches with an interactive element; and
	<u>prior to broadcasting, automatically</u> inserting the interactive element into the broadcast data stream if the media asset matches with interactive element.

22.	(Original) The computer-implemented method of claim 21, further comprising:
	passing the broadcast data stream to one or more receivers if the media asset does not match with an interactive element.

23.	(Original) The computer-implemented method of claim 21, wherein the media asset includes an audio pattern.

24.	(Original) The computer-implemented method of claim 21, wherein the media asset includes a voice pattern.

25.	(Original) The computer-implemented method of claim 21, wherein the media asset includes a video pattern.

26.	(Original) The computer-implemented method of claim 21, wherein the media asset includes a text pattern as a special degenerate case of a video pattern.

27.	(Original) The computer-implemented method of claim 21, wherein the checking if the media asset matches with the interactive element includes checking if the media asset matches with an attribute associated with the interactive element.

28.	(Original) The computer-implemented method of claim 21, wherein the interactive element includes an interactive television (TV) trigger.

29.   (Original) The computer-implemented method of claim 28, wherein the interactive TV trigger includes an Advanced Television Enhancement Forum (ATVEF) trigger.

30.   (Currently Amended) A computing system comprising:
        a recognizing unit to recognize a media asset in a broadcast data stream;
        a checking unit to check if the media asset matches with an interactive element; and
        an inserting unit to, prior to broadcasting, automatically insert the interactive element into the broadcast data stream if the media asset matches with interactive element.

31.   (Original) The computing system of claim 30, further comprising:
        a passing unit to pass the broadcast data stream to one or more receivers if the media asset does not match with an interactive element.

32.   (Original) The computing system of claim 30, wherein the media asset includes an audio pattern or a video pattern.

33.   (Original) The computing system of claim 30, wherein the media asset includes a voice pattern.

34.   (Original) The computing system of claim 30, wherein the media asset includes a video pattern.

35.   (Original) The computing system of claim 30, wherein the media asset includes a text pattern as a special degenerate case of a video pattern.

36.   (Original) The computing system of claim 30, wherein the checking unit is to check if the media asset matches with an attribute associated with the interactive element.

37.   (Original) The computing system of claim 30, wherein the interactive element includes an interactive television (TV) trigger.

38.   (Original) The computing system of claim 37, wherein the interactive TV trigger includes an Advanced Television Enhancement Forum (ATVEF) trigger.

39.   (Currently Amended) A machine-readable medium providing ~~including~~ instructions, which if executed by a processor, causes the processor to perform an operation comprising:

      recognizing a media asset in a broadcast data stream;

      checking if the media asset matches with an interactive element; and

      <u>prior to broadcasting, automatically</u> inserting the interactive element into the broadcast data stream if the media asset matches with interactive element.

40.   (Original) The machine-readable medium of claim 39, further providing instructions, which if executed by the processor, causes the processor to perform an operation comprising: passing the broadcast data stream to one or more receivers if the media asset does not match with an interactive element.

Reconsideration of this application is respectfully requested. A typographical error in paragraph [0036] of the specification has been corrected. The independent claims have been amended to recite automatic insertion of the interactive elements prior to broadcasting. These amendments are supported by the specification as filed, as for example, in at least paragraph [0024] of the specification, which states that "insertion platform architecture automatically inserts interactive TV trigger 112 into TV broadcast 108". Accordingly, no new matter is added.

1. Claims 1-3, 6, 8, 9, 11, 13, 16, 21-22, 24, 26, 28, 30-31, 33, 35, 37 and 39 are patentable over Feinleib, because Feinleib does not describe the automatic insertion of an interactive TV trigger.

Feinleib, U.S. Patent No. 6,637,032, describes a system in which, prior to the broadcast of a video program, a producer manually inspects a closed captioning script of that program to identify key words or phrases. Based on this inspection, a producer generates a key phrase data file, which is sent ahead of the broadcast of the video program to set top boxes in viewer's homes. The "key phrase data file" associates key words identified during the inspection with supplemental data that will be used to activate certain enhancement content. Later, during broadcast of the video program, the set top box inspects the closed captioning script and, upon detection of a key phrase encoded therein (e.g., as identified by matching with the key phrase data file), executes an associated enhancement action (e.g., displaying a hyperlink on a television screen). Feinleib at Abstract and col. 2, ll. 20-67.

Importantly, in the system described by Feinleib, there is no automatic insertion of an interactive TV trigger into the broadcast data stream as recited in the present claims. Indeed, no such triggers are inserted at all. Instead, key words in the closed captioning script are identified manually, and are used to create a code book of sorts (the key word data file), for use at the receiver. Then at the receiver, when a key word is identified an appropriate action is taken. This action is not equivalent to the automatic insertion of an interactive trigger as claimed, because the triggers described in Feinleib must be inserted manually. Automatic insertion reduces the effort and the

subsequent delay that is the inevitable result of inserting triggers manually because a human producer overseeing the process of inserting the triggers is unnecessary. Rather, elements inherent to the broadcast itself are recognized by the claimed invention, and that recognition causes an automatic insertion of a trigger for interactive content.

The instant invention is further patentable over Feinleib, because the supplemental data provided by the key phrase data structure in Feinleib is not the equivalent of the claimed interactive trigger. In Feinleib, the data structure 62 serves as a "look-up" table for matching phrases in the closed captioning script. This look-up table is downloaded to the set-top box prior to the broadcast. Upon a match between the closed captioning script of the broadcast and a phrase in the key phrase data structure, the parser 110 finds the supplemental data corresponding to the matched key phrase. This supplemental data is then used by the client to enhance the primary content.

In contrast, the claimed invention inserts an interactive trigger into the broadcast program before it reaches the set top box. Rather than a single static data structure downloaded to the set-top box, the claimed invention inserts interactive content into the data stream at different points along the path between the studio and the set-top box. For example, database 340B inserts interactive content in response to particular properties of the media elements within the broadcast. The interactive trigger is thus able to prompt different results based on the type of element recognized by the system and then incorporated into the trigger itself. The interactive trigger is also dependent on the preferences the user programs into the set-top box, again causing the insertion of different types of interactive elements depending on the preferences and the characteristics of the trigger itself. Furthermore, multiple insertion servers will receive instructions in different combinations from the pattern engine 305, and the type of pattern recognized by the pattern engine will result in a particular insertion of an interactive trigger from each insertion server. Thus, the inserted interactive trigger of the claimed invention is patentable over the non-interactive look-up table of the key phrase data structure described in Feinleib.

Various dependent claims are further patentable over Feinleib, because the addition of enhancing content is not possible in Feinleib for programs without closed captioning data. In

contrast, the instant invention uses a range of elements in a broadcast stream, such as voice elements (Claim 3), audio elements (Claim 4), video elements (Claim 5) as well as text elements (Claim 6). While the Office Action contends that closed captioning data is equivalent to voice/audio/video elements, this is incorrect, and the Feinleib reference itself distinguishes closed captioning data from audio elements as "a textual script of the audio content in the program". (Feinleib, Column 3, lines 60-62). Thus, Feinleib's closed captioning text is distinct from the audio content of the program itself. Video and voice data are similarly distinct from closed captioning data.

For at least these reasons the present claims are patentable over Feinleib.

2. Claims 1, 11, 21, 30 and 39 are patentable over Reynolds, because Reynolds does not describe the automatic insertion of an interactive TV trigger.

Reynolds, U.S. Patent Application Publication No. 2001/0037500, describes a system for selectively substituting local meta data in place of national meta data into an incoming data stream. Such substitution is done after stripping the meta data from the video data (see, e.g., Reynolds Figure 2 and its accompanying text).

In contrast, the present claims recite a process in which interactive TV triggers are automatically inserted in a broadcast data stream. Such triggers are not equivalent to the local meta data described by Reynolds. Indeed, it appears that prior to the substitution of local meta data for national meta data, interactive triggers already exist in the broadcast data stream discussed by Reynolds. See, e.g., paragraph [0014], indicating that such triggers are needed to allow the meta data to be accessed at the proper time. There is no teaching or suggestion in Reynolds of inserting such triggers automatically as presently claimed. All that is discussed in Reynolds is the substitution of local meta data for national meta data so that the triggers will cause a receiver to access the local meta data.

For at least these reasons, the present claims are patentable over Reynolds.

3. Claims 4-5, 14-15, 23, 25, 27, 34 and 36 are patentable over Feinleib even in view of Perlman, because the combination still fails to describe the automatic insertion of interactive TV triggers.

Claims 4-5, 14-15, 23, 25, 27, 32, 34 and 36 depend on claims allowable over Feinleib, as discussed above. Perlman is cited for describing a system that recognizes patterns in audio and video segments. Even if true, however, combining that description with Feinleib will not yield the present invention, inasmuch as such a combination would still not provide for automatically inserting the triggers as discussed above. At most, the combination would provide a basis other than the closed captioning script to be used for identifying "keys", but the notion of having a manually created "code book" that is accessed at the receiver on the basis of such keys would remain. Hence, the reasons advanced in favor of patentability of the claims over Feinleib, as discussed above, also apply to the combination of Feinleib and Perlman.

4. Claims 10, 20, 29 and 38 are patentable over Feinleib.

Claims 10, 20, 29 and 38 are patentable over Feinleib for at least the reasons discussed above with respect to their individual parent claims.

Please charge any deficiencies of fees associated with this communication to Deposit Account 19-3140.

Respectfully submitted,

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Dated: <u>April 25, 2006</u>

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